



A-68990-3

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1 atgcaccacc accaccacca cgtacgctcc tctcccgca ctccgtccga caaaccggta
 61 gctcacgtag tagctaacc gcaggctgaa ggtagctgc agtggctgaa ccgcgcgct
 121 aacgctctgc tggctaaccg tgtagaactg cgcgacaacc agctggtagt accgtccgaa
 181 ggtctgtacc tgatctactc ccaggctactg ttcaaaggctc aggggtgtcc gtccactcac
 241 gtactgctga ctacactat ctcccgcatc gctgtatcct accagactaa agtaaaccgtg
 301 ctgtccgcta tcaaattccc gtgtcagcgc gaaactccgg aagggtgctga agctaaaccg
 361 tggtagaac cgatctacct ggggtggtgta ttccagctgg aaaaagggtga ccgcctgtcc
 421 gctgaaatca accgcccga ctacctggac ttcgctgaat ccggtcaggt atacttcggt
 481 atcatcgctc tgtga

FIG. 6A

1 MHHHHHVRS SSRTPSDKPV AHVVANPQAE GQLQWLNRRR NALLANGVEL RDNQLVVPSE
 61 GLYLIYSQVL FKQGQCPSTH VLLTHTISRI AVSYQTKVNL LSAIKSPCQR ETPEGAEAKP
 121 WYEPIYLGGV FQLEKGDRLS AEINRPDYLD FAESGQVYFG IIAL

FIG. 6B

SEQ ID NO:	Wild-type TNF amino acid	Wild-type TNF amino acid number	Mutants created
9	Q	21	R
10	N	30	D
11	R	31	I, D, E
12	R	32	D, E, S
13	A	33	E
14	A	35	S
15	K	65	D, T, M, W, I, Q, S, N, V, E
16	G	66	Q, K
17	Q	67	D, W, Y, R, K, S
18	A	111	R, E
19	K	112	D, E
20	Y	115	Q, K, E, N, R, F, H, M, L, I, W, D, T, S
21	D	140	R, K
22	D	143	E, N, Q, S, R, K
23	F	144	N
24	A	145	R, D, K, N, H, T, Q, E, Y, M, S, F
25	E	146	N, K, R, S
26	S	147	R

ALSO MADE DOUBLE MUTANTS K65E/D143K (SEQ ID NO: 27), K65E/D143R (SEQ ID NO: 28), K65D/D143K (SEQ ID NO: 29) AND K65D/D143R (SEQ ID NO: 30)

FIG. 7